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ROWAN COMPANIES, INC.
2800 POST OAK BOULEVARD, SUITE 5450
HOUSTON, TEXAS 77056-6127

October 8, 2004

Via Overnight Mail

Docket Management Facility
U.S. Department of Transportation
400 Seventh Street, S.W.
Nassif Building, Room PL-401
Washington, DC 20590-001

Attention: Docket No. FAA-2004-18775 – 3

RE: Federal Aviation Administration 14 CFR Part 25
Safety Standards for Flight Guidance Systems;
Docket No. FAA-2004-18775; Notice No. 04-11

To Whom It May Concern:

Rowan Companies, Inc. (Rowan) is a provider of domestic and international contract oil and gas well drilling and aviation services. The company operates twenty-five (25) non self-propelled Mobile Offshore Drilling Units (MODUs), twenty-three (23) of which are located in U.S. waters, in the Gulf of Mexico. One additional MODU is under construction at the company's Vicksburg Mississippi facility. We employ approximately 1600 personnel offshore in the Gulf of Mexico, with approximately 50 percent manning our units at any given time. Helicopter transportation is the predominant means of transporting personnel to and from our MODUs.

Rowan is also the parent company of Era Aviation, Inc. (Era) a major provider of rotor and fixed wing aviation services under FAR Parts 135 and 121. Era currently owns/operates 86 helicopters and 16 fixed wing aircraft.
In response to the subject Notice of Proposed Rulemaking which appeared in the 13 August 2004 *Federal Register*, we offer the following comments.

Flight crew/flight deck automation interface is a legitimate concern not limited to transport category airplanes. As discussed above, the majority of our valued employees are transported on helicopters that also utilize sophisticated flight guidance systems. Many of Era's own helicopters and airplanes also use such systems. Accordingly, we respectfully request expansion of the scope of this rulemaking to include all flight guidance systems.

On 23 March 2004, Era's N579EH, a Sikorsky S-76A++ helicopter, was involved in an unfortunate incident that claimed the lives of its eight (8) passengers and two (2) crewmembers. We are working closely with the NTSB and FAA in connection with the investigation. While the investigation has not been concluded, we have noted several anomalies with the flight guidance system which was aboard N579EH. NTSB requested each party submit safety recommendations separate and apart from any commentary relative to Probable Cause. Era timely submitted its safety recommendations to NTSB, focusing on our concerns with respect to the automatic flight control system. Detailed below is copy of our safety recommendation, which we have revised to limit the commentary to the flight guidance issue.

SAFETY RECOMMENDATION OF ERA AVIATION, INC.
TO THE NATIONAL TRANSPORTATION SAFETY BOARD
FOLLOWING INVESTIGATION OF SIKORSKY S-76 ACCIDENT
N579EH, 3/23/04, GULF OF MEXICO, NTSB ID: DCA04MA030

Pursuant to the request of the NTSB Investigator-in-Charge of the referenced accident, Era Aviation, Inc. submits its recommendations regarding actions that might enhance safety and prevent future accidents. These recommendations are made without suggestion that the accident under investigation may have been caused by the matters addressed herein. Further, these recommendations are made subject to all of the same protections given the materials generated in connection with this investigation by the party participants.

The aircraft in question was equipped with a Honeywell SPZ 7000 Dual Digital Automatic Flight Control System (DDAFCS), which is a completely integrated autopilot/flight director/air data/autotrim system. It is further integrated with a variety of avionics equipment such as navigation receivers, gyros, radar altimeters and cockpit indications from an Electronic Flight Information System (EFIS). The combination of the two systems is referred to by flight crews as EFIS/DAFCS. This particular aircraft, N579EH, was further upgraded with a -932 flight computer to enhance reliability. The Autopilot provides two basic modes of operation, including SAS (Stability Augmentation System) and ATT (Attitude Retention).

On May 16 and 17, 2004, the NTSB party participants and IIC traveled to West Palm Beach, Florida to use the S-76 simulator at the Flight Safety International facility. During these simulations the Flight Safety instructor pointed out several idiosyncrasies/anomalies of the SPZ 7000 system.

- In most autopilots if the pilot selects only heading, the pilot gets only a single roll command bar on the Flight Director. However, in the SPZ 7000 if the pilot selects only heading, the pilot gets both pitch and roll command bars. Thus, inasmuch as the pilot observes two command bars he may believe that both pitch and roll are being managed by the autopilot. In this scenario, the pilots could be misled to believe altitude is being held stable. The pitch and roll command bar in such a situation would appear to indicate that the aircraft was flying straight and level because the SAS/ATT system is generally holding the aircraft level. However, the aircraft could, in fact, be in a gentle descent (i.e., 200 fpm).

- In change over of control from flying pilot to non-flying pilot situations, the SPZ 7000 does not alert to differing settings between the selections of the two pilots.

- The SPZ 7000 also will allow the pilot to accidentally uncouple the Autopilot while the Flight Director continues to display dual command bars for both heading and altitude.

The foregoing idiosyncrasies/anomalies are not covered in the SPZ 7000 Digital Integrated Flight Control System Pilot's Manual for the S-76, Honeywell Publication No. 28-1146-28-00, or in the Flight Manual Supplement for STC SH3200NM, Honeywell Publication No. 27-5120-19-01 Additionally, neither Flight Safety International's nor Era's training covers these anomalies. However, we have thoroughly discussed our concerns with our Training Department and we are in the process of adding these anomalies to the appropriate ground, flight and simulator training modules. These modules will include discussions, examples and a simulator session.

Based on the foregoing, Era Aviation recommends that immediate action be taken to require modification of the SPZ 7000 system and associated components so that only the command bar(s) that reflect the engaged axis (pitch and/or roll) controlling the aircraft be displayed. Additionally, we recommend amending the Honeywell materials referenced above as well as Honeywell's training materials in order to properly alert pilots to these potentially hazardous situations. Era Aviation also recommends that Honeywell/Sikorsky consider modifications to the referenced equipment that will provide appropriate additional warnings to flight crews during flight.

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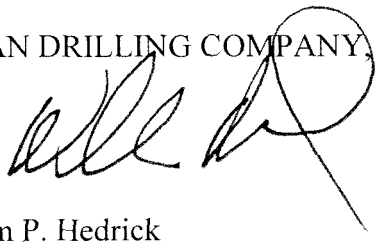
We videotaped the simulator sessions described above. Given the fact the NTSB has not concluded its investigation, the film has not been released for distribution. However, we are confident FAA may access the film by means of agency-to-agency communication.

Rowan sincerely appreciates the opportunity to comment.

Should you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

ROWAN DRILLING COMPANY, INC.



William P. Hedrick
Vice President, HSE and Regulatory Affairs
ERA AVIATION, INC., Vice President